

JC07 Rec'd PCT/PTO 15 FEB 2002

Form PTO-1390 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE (REV 10-95) TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371		ATTORNEY'S DOCKET NUMBER 0388-020200
INTERNATIONAL APPLICATION NO PCT/JP00/05459 ✓	INTERNATIONAL FILING DATE 14.08.00 (14 August 2000) ✓	U.S. APPLICATION NO. (If known, see 37 CFR 1.5) 10/049782 ✓
TITLE OF INVENTION SEALING LABEL		
APPLICANT(S) FOR DO/EO/US Katsumasa ISHIHARA, Eiji FUNABASHI, Yoichi KAWASHIMA, Junichi TOMIYAMA, Masayuki DATE, Kikuko YAMANAKA		
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items And other information		
<p>1. <input checked="" type="checkbox"/> This is a FIRST submission of items concerning a filing under 35 U.S.C. 371</p> <p>2. <input type="checkbox"/> This is a SECOND or SUBSEQUENT submission of items concerning a filing under 35 U.S.C. 371.</p> <p>3. <input checked="" type="checkbox"/> This express request to begin national examination procedures (35 U.S.C. 371(f)) at any time rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1)</p> <p>4. <input checked="" type="checkbox"/> A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date.</p> <p>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2)) a. <input type="checkbox"/> is transmitted herewith (required only if not transmitted by the International Bureau). b. <input checked="" type="checkbox"/> has been transmitted by the International Bureau. c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</p> <p>6. <input checked="" type="checkbox"/> A translation of the International Application into English (35 U.S.C. 371(c)(2)).</p> <p>7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3)) a. <input type="checkbox"/> are transmitted herewith (required only if not transmitted by the International Bureau) b. <input type="checkbox"/> have been transmitted by the International Bureau. c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired d. <input checked="" type="checkbox"/> have not been made and will not be made</p> <p>8. <input type="checkbox"/> A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3))</p> <p>9. <input type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4))</p> <p>10. <input type="checkbox"/> A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</p> <p>Items 11. to 16. below concern document(s) or information included:</p> <p>11. <input type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98</p> <p>12. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included</p> <p>13. <input checked="" type="checkbox"/> A FIRST preliminary amendment. <input type="checkbox"/> A SECOND or SUBSEQUENT preliminary amendment.</p> <p>14. <input type="checkbox"/> A substitute specification.</p> <p>15. <input type="checkbox"/> A change of power of attorney and/or address letter</p> <p>16. <input checked="" type="checkbox"/> Other items or information. a. WO 01/12518-Front Page (2 pp.) And International Search Report (1 p.)</p>		

U.S. APPLICATION NO. (if more than one) 37 CFR 1.5 107049782	INTERNATIONAL APPLICATION NO. PCT/JP00/05459	ATTORNEY'S DOCKET NUMBER 0388-020200		
<p>17. <input checked="" type="checkbox"/> The following fees are submitted:</p> <p>BASIC NATIONAL FEE (37 CFR 1.492(a)(1)-(5)):</p> <p>Search Report has been prepared by the EPO or JPO \$890.00</p> <p>International preliminary examination fee paid to USPTO (37 CFR 1.482) \$710.00</p> <p>No international preliminary examination fee paid to USPTO (37 CFR 1.482) but international search fee paid to USPTO (37 CFR 1.445(a)(2))..... \$740.00</p> <p>Neither international preliminary examination fee (37 CFR 1.482) nor International search fee (37 CFR 1.445(a)(2)) paid to USPTO. \$1040.00</p> <p>International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4) \$100.00</p>		CALCULATIONS PTO USE ONLY		
ENTER APPROPRIATE BASIC FEE AMOUNT =		\$ 890.00		
Surcharge of \$130.00 for furnishing the oath or declaration later than <input type="checkbox"/> 20 <input checked="" type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(e))		\$ 130.00		
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE	
Total claims	10 - 20	0	X \$18.00	\$ 0.00
Independent claims	1 - 3 =	0	X \$84.00	\$ 0.00
MULTIPLE DEPENDENT CLAIM(S) (if applicable)		+ \$280.00	\$ 0.00	
TOTAL OF ABOVE CALCULATIONS =		\$ 1020.00		
Reduction of 1/2 for filing by small entity, if applicable.		\$ 0.00		
SUBTOTAL =		\$ 1020.00		
Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30 months from the earliest claimed priority date (37 CFR 1.492(f)). +		\$ 0.00		
TOTAL NATIONAL FEE =		\$ 1020.00		
Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +		\$ 0.00		
TOTAL FEES ENCLOSED =		\$ 1020.00		
		Amount to be: Refunded	\$	
		Charged	\$	
<p>a. <input checked="" type="checkbox"/> A check in the amount of <u>\$ 1020</u> to cover the above fees is enclosed.</p> <p>b. <input type="checkbox"/> Please charge my Deposit Account No. _____ in the amount of \$ _____ to cover the above fees. A duplicate copy of this sheet is enclosed.</p> <p>c. <input checked="" type="checkbox"/> The Assistant Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>23-0650</u>. A duplicate copy of this sheet is enclosed.</p>				
<p>NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.</p>				
SEND ALL CORRESPONDENCE TO: Russell D. Orkin 700 Koppers Building 436 Seventh Avenue Pittsburgh, Pennsylvania 15219-1818 Telephone: (412) 471-8815 Facsimile: (412) 471-4094				
 SIGNATURE <u>Russell D. Orkin</u> NAME <u>25,363</u> REGISTRATION NUMBER				

10/049782
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PATENT APPLICATION/PCT
Attorney Docket No. 0388-020200

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of :

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Yoichi KAWASHIMA :
Junichi TOMIYAMA :
Masayuki DATE :
Kikuko YAMANAKA :

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PRELIMINARY AMENDMENT

Box PCT
Commissioner for Patents
Washington, D.C. 20231

Sir:

Prior to initial examination, please amend the above-identified patent application as follows:

IN THE CLAIMS:

Please amend claim 6 as follows:

6. (Amended) The sealing label according to claim 1, further comprising additional perforations extending from the point of contact between the horizontal

perforations and the inclined perforations for forming a V-shaped region with the inclined perforations.

Please add new claim 10 as follows:

10. The sealing label according to claim 5, further comprising additional perforations extending from the point of contact between the horizontal perforations and the inclined perforations for forming a V-shaped region with the inclined perforations.

REMARKS

The claims have been amended to place the application in conformance with standard United States patent practice.

Attached hereto is a marked-up version of the changes made to the specification by the current amendment. The attachment is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE".

Examination and allowance of pending claims 1-10 are respectfully requested.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the claims:

Claim 6 has been amended as follows:

6. (Amended) The sealing label according to claim 1 [or 5], further [comprises] comprising additional perforations extending from the point of contact between the horizontal perforations and the inclined perforations for forming a V-shaped region with the inclined perforations.

5/PYD

SPECIFICATION

TITLE OF THE INVENTION

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"SEALING LABEL"

TECHNICAL FIELD

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The present invention relates to a sealing label for sealing a container consisting of a barrel portion and a cap portion threaded and tightened on the barrel portion, the sealing label including a lower portion for substantially wrapping the barrel portion and an upper portion for substantially wrapping the cap portion. This sealing label is provided for identifying breaking of the seal or non-breaking of the seal and also for providing various data or information.

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BACKGROUND ART

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In a sealing label for a liquid container such as an eye dropper, if its horizontal perforations for breaking the sealing label is located upwardly of a shoulder of the barrel portion of the container, that is, upwardly of a border line between the barrel portion and the cap portion threaded and fastened to this barrel portion, liquid dripping during use of the container may be caught at the open gap between the lower portion of the sealing label which remains on the barrel portion after the breaking of the sealing label and the threaded portion, so that resultant accumulation dirt may present sanitary problem. For this reason, it is believed that the horizontal perforations should be located exactly at the shoulder of the barrel portion.

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However, in such case too, in repeated use of the container after the breaking of the label, if the upper portion of the sealing label cut off the

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perforations remains at the lower region of the cap, this may give a user an uncomfortable feel. Therefore, it is preferred that the upper portion of the sealing label wrapping the cap portion can be easily removed after breaking of the seal.

5 A typical conventional sealing film includes horizontal perforations along the upper and lower portions of the sealing film and vertical perforations extending vertically in the upper portion. When the container sealed with this sealing film is used, as a first step, the vertical perforations extending vertically in the upper portion of the sealing film wrapping the cap portion is broken open by holding a knob portion. As a second step, the upper portion removed from the cap portion is peeled off along the horizontal perforations provided adjacent the border between the barrel portion and the cap portion. As a third step, the cap is turned to open up the container. In this case, the operation involving the first step of vertically cutting off the upper portion of the sealing film along the vertical perforations and the subsequent step of removing this upper portion along the horizontal perforations is a rather troublesome operation, which may result in damage in the lower portion during the vertical cutting operation. That is, since the horizontal perforations and the vertical perforations are provided perpendicular to each other, the vertical cutting operation cannot proceed smoothly into the horizontal cutting operation.

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There has been also employed a sealing label made of a heat shrinkable synthetic resin and having an adhesive agent. With such sealing label, however, many of them have only the horizontal perforations. So, for breaking the seal, this is done by breaking the horizontal perforations by turning the cap. The label portion remaining on the cap will then have to be removed by pinching and forcibly pulling the exposed portion or cutting it by means of a cutter or the like.

25 At present, many containers on the market are sealed with the sealing label which is to be broken by one of the two method described above.

However, a user tends to try to break the seal by the method that this user first experienced or the method which suits his/her feeling. With either method used, it is difficult to obtain satisfaction of all users, leaving either type of users dissatisfied.

5 In particular, in the case of containers such as eye droppers, it is desired that it allow clear distinction between the seal broken condition and the seal un-broken condition and also that it provide tamperproof function. However, in the case of the container sealed with the sealing label having only the horizontal perforations, after the seal is broken, if the cap is
10 fastened again to its original position, sometimes the trace of the seal break cannot be visually judged, hence such sealing label is not suitable for tamperproof. In particular, in the case of e.g. a small eye dropper for medical treatment, the dropper is not put in a carton one by one, but a plurality of them are put in one carton. Hence, it is desired that the
15 dropper gives clear and easy confirmation of seal-unbroken condition for each dropper. In the case of containers such as eye droppers, clear distinction between the seal broken condition and the seal un-broken condition and reliable tamperproof ability are desired.

20 DISCLOSURE OF THE INVENTION

An object of the present invention is to provide a sealing label which allows smooth transition from breaking of perforations in the upper area of the label to the horizontal perforations when the label is removed from the upper area thereof by holding a knob portion and which also allows easy distinction between the seal broken condition and the seal un-broken condition when the label is removed by breaking the horizontal perforations by turning the cap from the beginning.

For accomplishing the above-noted object, a sealing label for
30 sealing a container consisting of a barrel portion and a cap portion threaded

and tightened on the barrel portion, the sealing label including a lower portion for substantially wrapping the barrel portion and an upper portion for substantially wrapping the cap portion, wherein the sealing label includes horizontal perforations consisting of cut segments and uncut segments extending along a border between the upper portion and the lower portion; a knob portion disposed at an edge of the upper portion; and inclined perforations consisting of cut segments and uncut segments extending obliquely in the upper portion from the knob portion to the horizontal perforations.

With this construction, it is possible to break the seal by either breaking the perforations in the upper portion of the sealing label by holding the knob portion or breaking the horizontal perforations by turning the cap portion. Moreover, in the case of breaking the seal by holding the knob portion, since the perforations are inclined relative to the horizontal perforations, the transition to the breaking of the horizontal perforations may proceed smoothly. Further, in the case of breaking the seal by turning the cap, simultaneously with the breaking of the horizontal perforations, the breaking of the inclined perforations occurs, thereby to provide easy distinction between the seal broken condition and the seal unbroken condition. Needless to say, in the case of breaking the seal by breaking the horizontal perforations with holding the knob portion, the seal portion may be removed easily and completely, thus providing reliable tamperproof function.

According to a preferred embodiment of the present invention, as the extending shape of the inclined perforations, straight extending shape or downwardly convex curved extending shape is chosen for obtaining optimal breakability, although the shape will depend on e.g. the diameter of the cap or the pitch of the cut and uncut segments of the perforations.

According to one preferred embodiment of the present invention, the sealing label further includes additional perforations extending from the

point of contact between the horizontal perforations and the inclined perforations for forming a V-shaped region with the inclined perforations. With this arrangement, when the gap is turned, the trace of the seal breakage in the form of a triangular region will be produced, which allows clear distinction between the seal broken condition and the seal un-broken condition at a glance, thus providing reliable tamperproof function. That is, when the cap is turned for breaking the seal, first, the breakage begins from that of the horizontal perforations. In this, due to the presence of V-shaped cut segment produced by the inclined perforations and the additional perforations at the contact area between the horizontal perforations and the inclined perforations, the inclined perforations will begin to break before the uncut segment of the horizontal perforations at this area is completely broken. Thereafter, in association with the rotation of the cap, the seal label portion between the horizontal perforations and the inclined perforations will be removed from the cap and the horizontal perforations will be broken accordingly. As a result, the triangular cutting line trace will always be produced, which allows distinction between the seal broken condition and the seal un-broken condition at a glance. The angle between the inclined perforations and the additional perforations, i.e. the angle of the V-shaped region, is preferably from 100 degrees to 160 degrees, more preferably about 120 degrees.

In order to obtain the above-described function/effect more effectively, according to one preferred embodiment of the present invention, the uncut segment of the horizontal perforations located at the contact area between the horizontal perforations and the inclined perforations is formed as an elongate uncut segment which has a greater length than that of the other uncut segments of the horizontal perforations. With this arrangement, when the seal is broken by turning the cap, the portion of the label contacting the portion of the horizontal perforations will resist breaking, so that the inclined perforations will begin to break in an efficient

manner before the uncut segment of the horizontal perforations is completely broken. More preferably, the elongate uncut segment is disposed in contact with a cut segment of the inclined perforations.

Similarly, in order to obtain efficient breakage of the inclined perforations, it is also important that a length ratio of the cut segment relative to the uncut segment of the inclined perforations be greater than a length ratio of the cut segment relative to the uncut segment of the horizontal perforations.

The lengths of the cut segment and uncut segment of the horizontal perforations and the inclined perforations will be appropriately determined, depending on e.g. the type of material forming the label, the size and intended use of the container, etc. Taking an eye dropper for example, the following lengths are employed normally.

For the horizontal perforations, its cut segment has a length of 2 to 3 mm, preferably about 2.5 mm and its uncut segment has a length of 0.2 to 1 mm, preferably about 0.5 mm. And, the above-described uncut segment of the horizontal perforations at the contact area between the horizontal perforations and the inclined perforations, that is, the elongate uncut segment, has a length of 1.5 to 2.5 mm, preferably about 2 mm.

On the other hand, for the inclined perforations, its cut segment has a length of 3 to 4 mm, preferably about 3.5 mm and its uncut segment has a length of 0.2 to 1 mm, preferably about 0.5 mm. The additional perforations will have values similar to those of the inclined perforations and has 2 to 3 cut segments.

According to one preferred embodiment of the present invention, the sealing label is formed of heat shrinkable synthetic resin with an adhesive agent. With this, the adherence of the sealing label may be improved and also after the breakage of the seal, the lower portion of the sealing label will adhere to the container reliably, so that the various data or information required for the medical product or the like printed on this

lower portion will not be lost inadvertently.

BRIEF DESCRIPTION OF THE DRAWINGS

[Fig. 1] a development of surface of a sealing label according to a first embodiment of the present invention,

[Fig. 2] an enlarged view showing a mode of horizontal perforations, inclined perforations and additional perforations of the sealing label shown in Fig. 1,

[Fig. 3] an enlarged view corresponding to Fig. 2 with the additional perforations being omitted therefrom,

[Fig. 4] a perspective view showing a container sealed with the sealing label of Fig. 1,

[Fig. 5] a perspective view showing a condition when the seal is to be broken by turning the cap of the container shown in Fig. 4,

[Fig. 6] a development of surface of a sealing label according to a second embodiment of the present invention,

[Fig. 7] a development of surface of a sealing label according to a third embodiment of the present invention,

[Fig. 8] a development of surface of a sealing label according to a fourth embodiment of the present invention,

[Fig. 9] a perspective view showing a container sealed with the sealing label according to the fourth embodiment of the present invention, and

[Fig. 10] a perspective view showing a condition trying to break the seal by turning the cap of the container shown in Fig. 9.

BEST MODE OF EMBODYING THE INVENTION

30 [First Embodiment]

A first embodiment of the present invention will be described with reference to Figs. 1 through 5.

Fig. 1 is a development of a sealing label 1 according to the present invention. This sealing label 1 includes a lower portion 1A as the lower half and an upper portion 1B as the upper half, and the sealing label being formed of a heat shrinkable synthetic resin with an adhesive agent being applied to a desired portion in the back surface thereof, preferably in the back surface of the lower portion 1A. This sealing label 1 includes perforations as shown in Fig. 2 or 3.

This sealing label 1 is for sealing a container 2 as shown in Fig. 4 consisting of a barrel portion 3 and a cap portion 4 threaded and fastened to a threaded portion provided at an upper region of the barrel portion 3. In doing so, the lower portion 1A of the sealing label 1 is to cover the barrel portion 3 and the upper portion 1B of the sealing label 1 is to cover the cap portion 4.

At the upper edge of the upper portion 1B of the sealing label 1, there is formed a knob portion 1a in the form of a tongue. The perforations formed in the sealing label 1 include horizontal perforations 10 consisting of cut segments 11 and uncut segments 12 extending along the border between the upper portion 1B and the lower portion 1A and inclined perforations 20 consisting of cut segments 21 and uncut segments 22 extending obliquely in the upper portion 1B from the knob portion 1a to the horizontal perforations 10. Thus, when tightly fitted to the container 2, the horizontal perforations 10 are to be located along the border between the barrel portion 3 and the cap portion 4 of the container 2.

Further, in this embodiment, as best shown in Fig. 2, there are provided additional perforations 30 extending from a contact point between an elongate uncut segment 13 of the horizontal perforations 10 having a greater length than the other uncut segments 12 thereof and the cut

segment 21 of the inclined perforations so as to form a V-shaped region with the inclined perforations 20, in mirror symmetry and with forming 120 degree angle relative to the inclined perforations. The additional perforations 30 have a length of one or two cut segments 31 and uncut segments 32.

The elongate uncut segment 13 of the horizontal perforations 10 forming the contact point area with the inclined perforations 20 has a length of about 2 mm. Whereas, the other uncut segments of the horizontal perforations 10 have a length of about 0.5 mm. Further, each cut segment 11 of the horizontal perforations 10 has a length of about 2.5 mm.

The inclined perforations 20 are provided in the form of downwardly convex curved perforations in the instant embodiment and its cut segment 21 has a length of about 3.5 mm and its uncut segment 22 has a length of about 0.5 mm, respectively.

Fig. 4 shows an eye dropper 2 sealed with the sealing label 1 having the above-described construction. Fig. 5 illustrates a condition in which the seal is cut, i.e. broken, by turning the cap portion 4 of this eye dropper 2.

Incidentally, as may be apparent from Figs. 4 and 5, the sealing label 1 affixed to the eye dropper 2 will be cut and broken by turning the cap portion 4 as described above. However, if the above-described additional perforations 30 are omitted (see Fig. 3), when the turning of the cap 4 begins, the uncut segments 12 and the elongate segment 13 of the horizontal perforations 10 will be cut also. In this, however, as the inclined perforations 20 were heat shrunk to fit tightly to the cap portion 4, its uncut segments 22 will remain uncut. In this mode of embodiment, for removing the upper portion 1B of the sealing label 1, it is necessary to cut one by one the uncut segments 22 of the inclined perforations 20 by holding the knob portion 1a.

On the other hand, when the additional perforations 30 are

provided, in association with the start of turning of the cap portion 4, due to a cushioning effect provided by the V-shaped cut portion formed by the two cut segments 21, 31 forming the crossing portion between the inclined perforations 20 and the additional perforations 30, the uncut segment 22 of the inclined perforations 20 will begin to be broken before the elongate uncut segment 13 is broken. So that, only a sealing label portion 1Bb upwardly of the inclined perforations 20 will be rotated together with the turning cap 4. And, as the cap portion 4 is moved upward with further rotation thereof, as illustrated in Fig. 5, the inclined perforations 20 will be broken successively upwards and a sealing label portion 1Ba downwardly of the inclined perforations 20 will become bent. In this manner, as the triangular portion 1Ba separated in the above manner will be bent in a complex manner, this will provide clear trace of the seal broken event. At the same time, as such bent and curled portion cannot be easily restored, it also becomes impossible to restore the seal on purpose so as not to leave any trace of the seal broken event.

[Second Embodiment]

Next, a second embodiment of the present invention will be described with reference to Fig. 6.

Fig. 6 is a development of a sealing label 1 according to the second embodiment of the present invention. In this sealing label 1, its inclined perforations 120 consists of two straight series of perorations which are to form a single continuous series of perforations when the label is wrapped around the container 2. In this respect, this embodiment differs from the foregoing embodiment.

[Still Further Embodiments]

Fig. 7 is a development of a sealing label 1 according to a third embodiment of the present invention. This sealing label 1 has an upper portion 1B which is sized so that when the label is tightly fitted to the container 2 for sealing it, the leading end of the knob portion 1a will be located at substantially the top face edge of the cap portion 4.

Further, Fig. 8 is a development of a sealing label 1 according to a fourth embodiment of the present invention. This sealing label 1 has an upper portion 1B which is sized so that when the label is tightly fitted to the container for sealing it, the leading end of the knob portion 1a will be located spaced apart by a predetermined distance from the top face edge of the cap portion 4.

In the case of an eye dropper, various data or information may sometimes be provided on the top face of the cap portion 4. Then, the third embodiment or fourth embodiment will be employed when it is necessary to prevent this display from being concealed by the sealing label. Further, by employing the construction with the knob portion 1a not projecting from the top face of the cap portion 4, this will achieve further effect of reducing the trouble of hooking of the knob portion 1a during a labeling step or a box packaging step in the manufacture process. Further, as the sealing label per se may be formed smaller, the material cost may be reduced as well.

Figs. 9 and 10 are a perspective view of the eye dropper 2 sealed with the sealing label according to the fourth embodiment and a perspective view illustrating a condition when an attempt has been made to break the seal by turning the cap portion 4 of this eye dropper 2, respectively.

INDUSTRIAL APPLICABILITY

When a user tries to break the sealing label 1 by holding the knob portion 1a, the sealing label 1 may be removed smoothly with a single action. Further, the sealing may be broken also only by turning the cap portion 4 of

the container 2 sealed with this sealing label 1. In doing this, the triangular separated portion 1Ba will always leave the curved trace which can be easily recognized and which cannot be restored, so that the tamperproof function is provided.

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What is claimed is:

1. A sealing label for sealing a container consisting of a barrel portion and a cap portion threaded and tightened on the barrel portion, the sealing label including a lower portion for substantially wrapping the barrel portion and an upper portion for substantially wrapping the cap portion,

5 wherein the sealing label includes horizontal perforations consisting of cut segments and uncut segments extending along a border between the upper portion and the lower portion; a knob portion disposed at an edge of the upper portion; and inclined perforations consisting of cut segments and uncut segments extending obliquely in the upper portion from the knob portion to the horizontal perforations.

10 2. The sealing label according to claim 1, wherein the inclined 15 perforations extend straight.

3. The sealing label according to claim 1, wherein the inclined 20 perforations extend as a downwardly convex curve.

25 4. The sealing label according to claim 1, wherein the uncut segment of the horizontal perforations located at the contact area between the horizontal perforations and the inclined perforations is formed as an elongate uncut segment which has a greater length than that of the other uncut segments of the horizontal perforations.

5. The sealing label according to claim 4, wherein a cut segment of the 30 inclined perforations is tangential to the elongate uncut segment.

6. The sealing label according to claim 1 or 5, further comprises additional perforations extending from the point of contact between the

horizontal perforations and the inclined perforations for forming a V-shaped region with the inclined perforations.

7. The sealing label according to claim 6, wherein a length ratio of the cut segment relative to the uncut segment of the inclined perforations is greater than a length ration of the cut segment relative to the uncut segment of the horizontal perforations.

8. The sealing label according to claim 7, wherein the sealing label is formed of heat shrinkable synthetic resin.

9. The sealing label according to claim 8, wherein an adhesive agent is applied to the back surface of the lower portion.

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ABSTRACT OF THE DISCLOSURE

For sealing a container (2) consisting of a barrel portion (3) and a cap portion (4) threaded and tightened on the barrel portion, the sealing label (1) includes a lower portion (1A) for substantially wrapping the barrel portion and an upper portion (1B) for substantially wrapping the cap portion. The sealing label includes horizontal perforations (10) consisting of cut segments (11) and uncut segments (12; 13) extending along a border between the upper portion and the lower portion; a knob portion (1a) disposed at an edge of the upper portion; and inclined perforations (20) consisting of cut segments (21) and uncut segments (22) extending obliquely in the upper portion from the knob portion to the horizontal perforations.

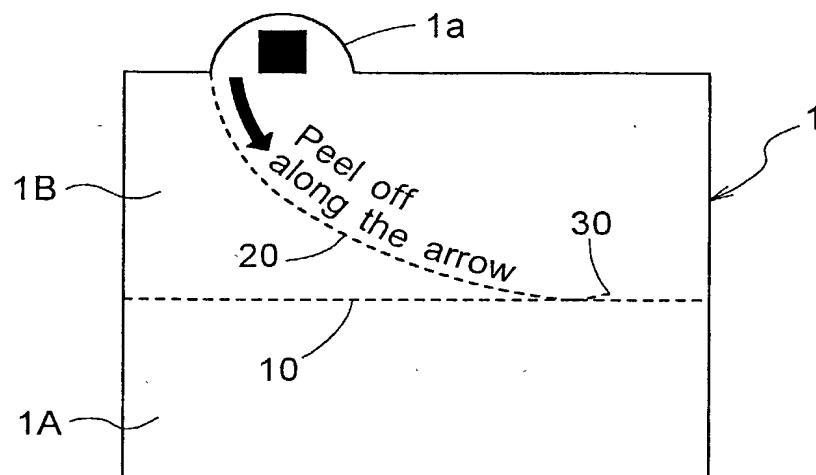
1/4
FIG.1

FIG.2

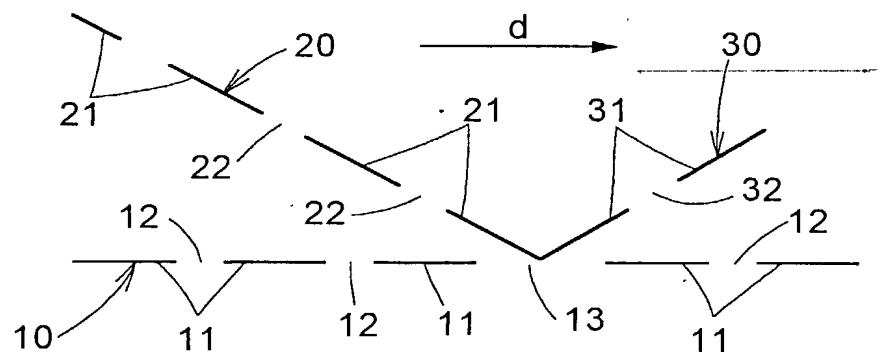
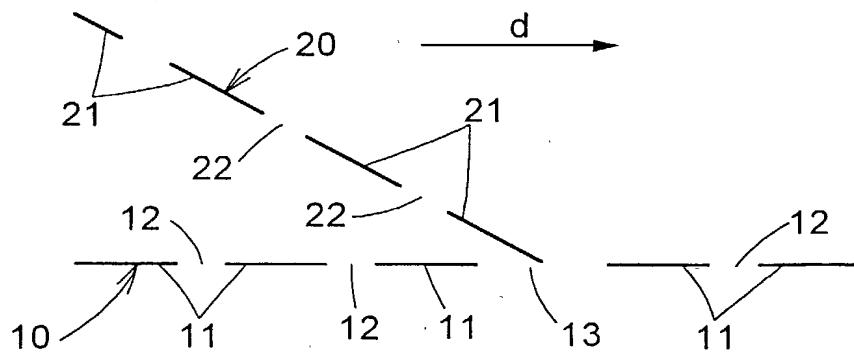


FIG.3



2/4
FIG.4

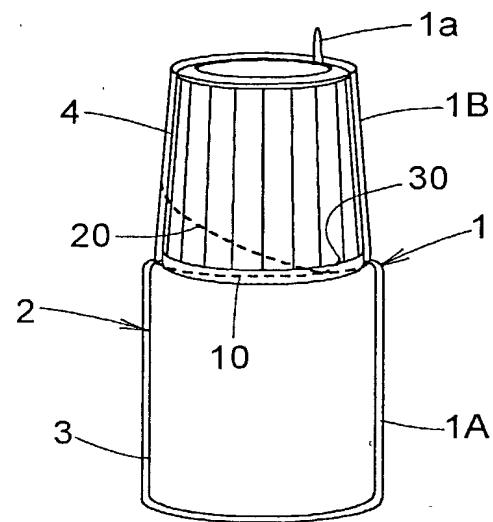
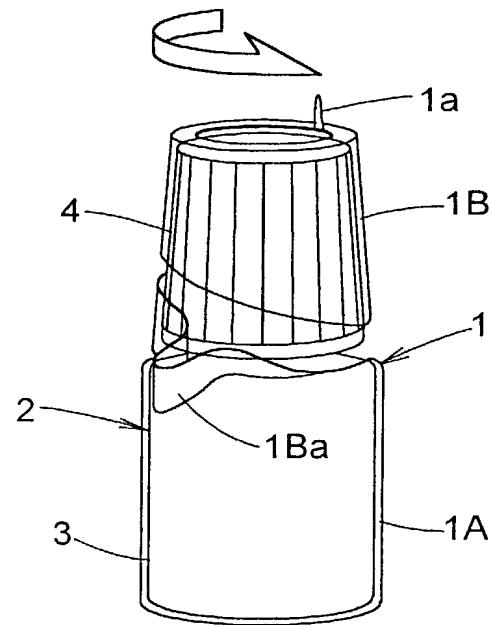


FIG.5



3/4
FIG.6

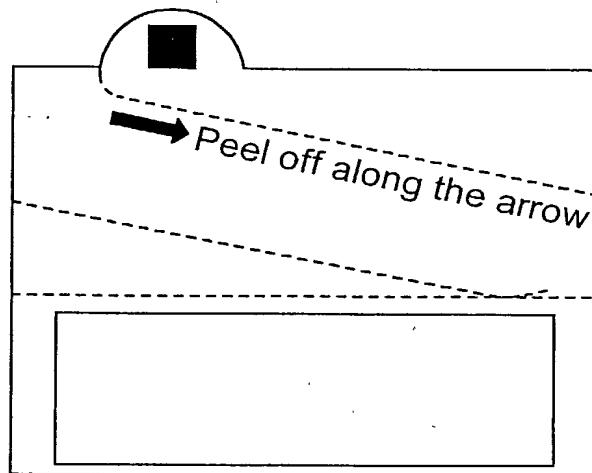


FIG.7

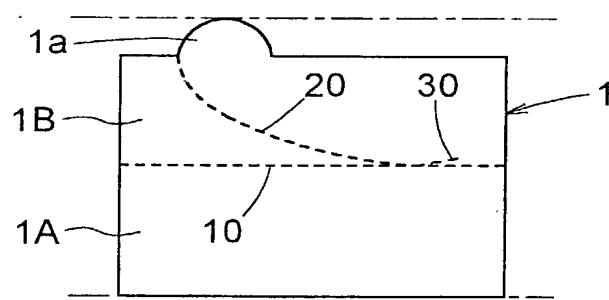
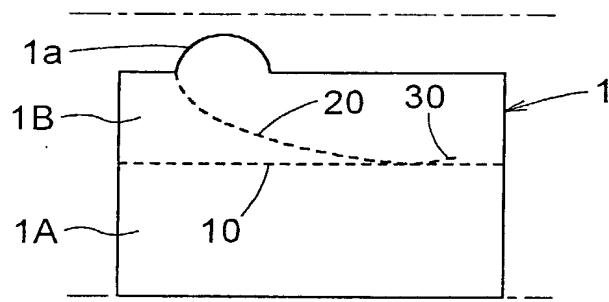


FIG.8



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FIG.9

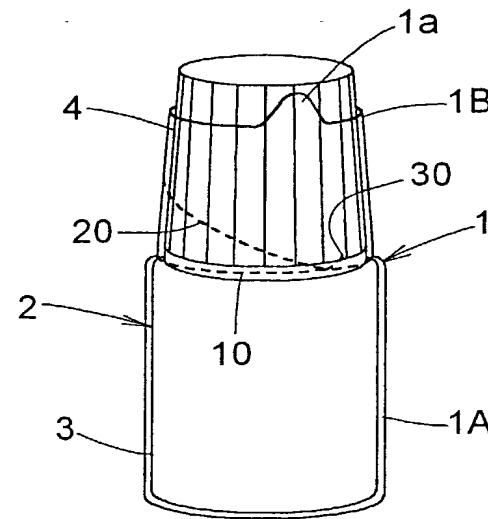
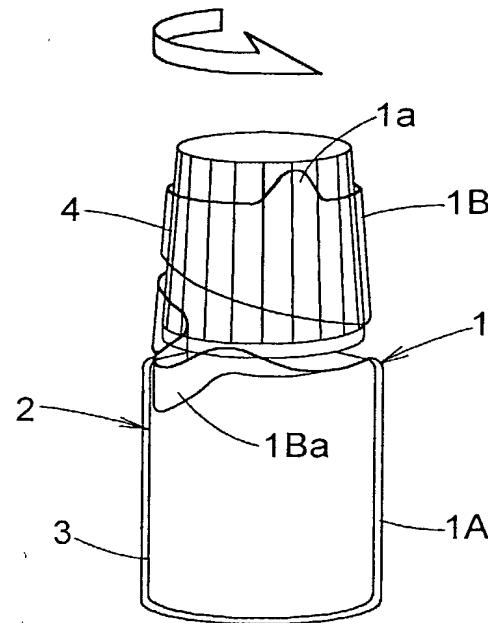


FIG.10



10/049782
JC13 Rec'd PCT/PTO 15 FEB 2002

PATENT APPLICATION/PCT
Attorney Docket No. 0388-020200

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of :

Katsumasa ISHIHARA : SEALING LABEL
Eiji FUNABASHI :
Yoichi KAWASHIMA :
Junichi TOMIYAMA :
Masayuki DATE :
Kikuko YAMANAKA :

International Application :
No. PCT/JP00/05459 :

International Filing Date :
14 August 2000 :

Priority Date Claimed :
17 August 1999 :

Serial No. Not Yet Assigned :

Filed Concurrently Herewith : Pittsburgh, Pennsylvania
February 15, 2002

LETTER RECOGNIZING ATTORNEYS

Box PCT
Commissioner for Patents
Washington DC 20231

Sir:

Enclosed are appropriate papers for initiating the national phase of the above-identified PCT application, comprising a specification, claims, abstract and drawings. A Preliminary Amendment is also enclosed.

3 -
Please accept the application for purposes of granting a filing date and recognize Russell D. Orkin, Richard L. Byrne and Blynn L. Shideler, Registration Nos. 25,363, 28,498, and 35,034, respectively, as attorneys in this application, pending the filing of a formal Declaration and Power of Attorney.

10/049782

JC13 Rec'd PCT/PTO 15 FEB 2002

Kindly direct all communications relating to this application to **Russell D. Orkin**.

Respectfully submitted,

WEBB ZIESENHEIM LOGSDON
ORKIN & HANSON, P.C.

By _____

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COMBINED DECLARATION FOR PATENT APPLICATION AND POWER OF ATTORNEY
(Includes Reference to PCT International Applications)

ATTORNEY'S DOCKET NUMBER

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

SEALING LABEL

83
TX 117 US

the specification of which (check only one item below):

is attached hereto.

was filed as United States application

Serial No. 10/049,782 ✓

on February 15, 2002 ✓

and was amended

on _____ (if applicable).

was filed as PCT international application

Number PCT/JP00/05459 ✓

on August 14, 2000 ✓

and was amended under PCT Article 19

on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a).

I hereby claim foreign priority benefits under Title 35, United States Code, §119 of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

PRIOR FOREIGN/PCT APPLICATION(S) AND ANY PRIORITY CLAIMS UNDER 35 U.S.C. 119:

COUNTRY (if PCT, indicate "PCT")	APPLICATION NUMBER	DATE OF FILING (day, month, year)	PRIORITY CLAIMED UNDER 35 USC 119
Japan ✓	Pat. 11-267597✓	17/August/1999 ✓	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO
			<input type="checkbox"/> YES <input type="checkbox"/> NO

Combined Declaration For Patent Application and Power of Attorney (Continued)
 (Includes Reference to PCT International Applications)

ATTORNEY'S DOCKET NUMBER

I hereby claim the benefit under Title 35, United States Code, §120 of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code, §112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, §1.56(a) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application:

PRIOR U.S. APPLICATIONS OR PCT INTERNATIONAL APPLICATIONS DESIGNATING THE U.S. FOR BENEFIT UNDER 35 U.S.C. 120:

U.S. APPLICATIONS

STATUS (Check one)

U.S. APPLICATION NUMBER	U.S. FILING DATE	PATENTED	PENDING	ABANDONED

PCT APPLICATIONS DESIGNATING THE U.S.

PCT APPLICATION NO	PCT FILING DATE	U.S. SERIAL NUMBERS ASSIGNED (if any)		

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (List name and registration number)

William H. Logsdon	<u>22,132</u>	Barbara E. Johnson	<u>31,198</u>	Lester N. Fortney	<u>38,141</u>
Russell D. Orkin	<u>25,363</u>	Paul M. Reznick	<u>33,059</u>	Randall A. Notzen	<u>36,882</u>
David C. Hanson	<u>23,024</u>	John W. McIlvaine	<u>34,219</u>	Jewsse A. Hirshman	<u>40,016</u>
Frederick B. Ziesenhein	<u>19,438</u>	Michael I. Shamos	<u>30,424</u>	James G. Porcelli	<u>33,757</u>
Richard L. Byrne	<u>28,498</u>	Blynn L. Shideler	<u>35,034</u>	Kent E. Baldauf, Jr.	<u>36,082</u>
Kent E. Baldauf	<u>25,826</u>	Julie W. Meder	<u>36,216</u>		

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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

SIGNATURE OF INVENTOR 201	SIGNATURE OF INVENTOR 202	SIGNATURE OF INVENTOR 203
<u>Katsumasa Ishihara</u>	<u>Eiji Funabashi</u>	<u>Yoichi Kawashima</u>
DATE KATSUMASA ISHIHARA May 20, 2002	DATE EIJI FUNABASHI May 20, 2002	DATE YOICHI KAWASHIMA May 20, 2002

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	POST OFFICE ADDRESS	POST OFFICE ADDRESS <u>c/o Santen Pharmaceutical Co., Ltd.</u> <u>9-19, Shimoshinjo 3-chome, Higashiyodogawa-ku, Osaka, Japan</u>		
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	POST OFFICE ADDRESS	POST OFFICE ADDRESS <u>c/o Santen Pharmaceutical Co., Ltd.</u> <u>9-19, Shimoshinjo 3-chome, Higashiyodogawa-ku, Osaka, Japan</u>		
600 206	FULL NAME OF INVENTOR	FAMILY NAME <u>YAMANAKA</u>	FIRST GIVEN NAME <u>KIKUKO</u>	SECOND GIVEN NAME
	RESIDENCE & CITIZENSHIP	CITY <u>Higashiyodogawa-ku,</u> <u>Osaka</u> <u>JPX</u>	STATE OR FOREIGN COUNTRY <u>Japan</u>	COUNTRY OF CITIZENSHIP <u>Japan</u> ✓
	POST OFFICE ADDRESS	POST OFFICE ADDRESS <u>c/o Santen Pharmaceutical Co., Ltd.</u> <u>9-19, Shimoshinjo 3-chome, Higashiyodogawa-ku, Osaka, Japan</u>		

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

SIGNATURE OF INVENTOR 204	SIGNATURE OF INVENTOR 205	SIGNATURE OF INVENTOR 206
<i>Junichi Tomiyama</i>	<i>Masayuki Date</i>	<i>Kikuko Yamanaka</i>
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